

Health Consultation

REMACOR SITE

WEST PITTSBURG, LAWRENCE COUNTY, PENNSYLVANIA

EPA FACILITY ID: PAD074965096

JANUARY 10, 2007

U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES
Public Health Service
Agency for Toxic Substances and Disease Registry
Division of Health Assessment and Consultation
Atlanta, Georgia 30333

Health Consultation: A Note of Explanation

An ATSDR health consultation is a verbal or written response from ATSDR to a specific request for information about health risks related to a specific site, a chemical release, or the presence of hazardous material. In order to prevent or mitigate exposures, a consultation may lead to specific actions, such as restricting use of or replacing water supplies; intensifying environmental sampling; restricting site access; or removing the contaminated material.

In addition, consultations may recommend additional public health actions, such as conducting health surveillance activities to evaluate exposure or trends in adverse health outcomes; conducting biological indicators of exposure studies to assess exposure; and providing health education for health care providers and community members. This concludes the health consultation process for this site, unless additional information is obtained by ATSDR which, in the Agency's opinion, indicates a need to revise or append the conclusions previously issued.

You May Contact ATSDR Toll Free at
1-800-CDC-INFO

or

Visit our Home Page at: <http://www.atsdr.cdc.gov>

HEALTH CONSULTATION

REMACOR SITE

WEST PITTSBURG, LAWRENCE COUNTY, PENNSYLVANIA

EPA FACILITY ID: PAD074965096

Prepared By:

Division of Regional Operations and
Division of Health Assessment of Consultation
Agency for Toxic Substances and Disease Registry
U.S. Department of Health and Human Services

Table of Contents

Foreword.....	ii
Summary and Statement of Issues	3
Background.....	3
Site Description and History.....	3
Demographics	4
Community Health Concerns.....	4
Discussion.....	4
Child Health Considerations	4
Conclusions.....	5
Recommendations.....	5
Authors, Technical Advisors	7
References.....	8

Foreword

[Insert Foreword here]

Summary and Statement of Issues

Background

Site Description and History

The Remacor, Inc., (Remacor) facility has operated for about 40 years in West Pittsburg, PA. West Pittsburg is about 60 miles north of Pittsburgh and about 5 miles south of Newcastle, PA. Currently, it has recycled magnesium (Mg) scrap into powders and granules for the steel industry. The company received the Mg either as turnings, fines, shavings, or solid scrap. The turnings, fines, and shavings are ignitable. As a result of the Remacor processing, the plant generated magnesium and lime waste, magnesium oxide waste, lime waste, and process wastewater.

In August 2005, the Mg materials ignited resulting in a fire that destroyed a 68,000 square foot building at the facility including equipment used by Remacor for processing. Although no longer able to process the scrap, Remacor continued to collect and improperly store these materials [1]. Local and state officials became concerned. PADEP filed a court order to cease accumulating magnesium cuttings, improve storage conditions and begin recycling and or reduce the amount of magnesium cuttings on site. Remacor continued to operate and was found in contempt of a court order to remedy deficiencies outlined in a State consent decree.

In March 2006 a site inspection found several hazards associated with the site including those associated with public health issues. These included the perimeter fencing needing repair, debris and spills widely dispersed on site, unsecured stored Mg materials in mostly drums or large super sack containers, that the containers were stored in buildings with leaky roofs or lacking doors, that placarding of hazardous material storage areas was not evident, that drums were mislabeled, that chemical runoff was observed in several locations, and that surface runoff was openly entering storm drains. Local officials notified both the Pennsylvania Department of Environmental Protection (PADEP) and the US Environmental Protection Agency (EPA). Further inspections identified the presence of radioactive materials on site.

In September 2006, the Agency for Toxic Substances and Disease Registry participated in a conference call with EPA and PADEP to discuss the radiation issues as well as the presence of the magnesium wastes.

On September 13, 2006, EPA initiated emergency removal actions and related actions including securing the Site with 24-hour security services, repairing the perimeter fence, establishing runoff controls, marking and covering or excavating areas of elevated radiation, and conducting limited excavations in spill areas. During these activities, additional levels of radioactivity were found. EPA requires additional time and monies to address the large volume of hazardous materials that are improperly stored at the Site and to conduct further evaluation of, and mitigation of, sources of ionizing radiation and contaminated soil, surface water and groundwater attributed to the site [1].

The primary concerns raised to ATSDR include the widely spread low level activity and large amount of poorly stored pyroforic materials, estimated to exceed over 3,000,000 pounds, that can become an inhalation hazard to the population downwind of the facility in the event of a fire [2].

Demographics

Based on information received from the EPA, the nearest residence is about 1/3 mile to the east; however, municipal buildings are adjacent to the site. The ATSDR Geographical Information Systems developed population information and that map is depicted in Figure 1.

Within one mile of the site, the population is about 1054, of which 1037 are White, 6 Black, and the remaining population consisting of American Indians, Native Americans Hawaiians, Asians, Hispanics, or other races. Included in this population are about 170 women of child-bearing age and about 85 children below the age of 6. These women and children comprise the population at greatest risk from exposure to the contaminants of concern identified at this site.

Community Health Concerns

At the present time, the health concerns expressed to ATSDR include the impact of another fire at the facility and the presence of radioactive materials.

Discussion

With regards to the radioactive contamination, the site is not covered by a license from the Nuclear Regulatory Commission (NRC); therefore, ATSDR has the authority to investigate the issues. According to the state, radiation readings in the waste pile can exceed 500 microRoentgens per hour [3]. A trespasser or worker will exceed the ATSDR Minimum Risk Level (MRL) of 100 millirem per year in as few as 200 hours. Workers are included in this category because the site is not licensed; therefore, workers are considered to be members of the public, not radiation workers. The radioactive materials tentatively identified at the site include cesium-137 and thorium-232.

Magnesium is a water-reactive metal and can pose a significant fire hazard. Hydrogen is released when Magnesium reacts with water. Magnesium fires are initiated by the ignition of the hydrogen, and once started, are extremely difficult to extinguish. Factors affecting the hazard and the rate of hydrogen production include the purity of the metal, size of the particles, amount of moisture present, temperature, and the degree of oxide coating on the metal. Pure magnesium in the form of a dust or powder represents a serious fire and explosion hazard [4].

Because the site is unsecured and the radiation levels exceed estimated background by as much 25 times, the site poses a health hazard to the surrounding community. Coupled with the high potential for fires, the potential pathways of exposure include direct exposure to ionizing radiation, potential inhalation of smoke containing radioactive materials (thorium has the most stringent inhalation limits per Title 10 Code of Federal Regulations Part 20). Other potential pathways that exist as a result of a fire include contamination of the stream with radioactive materials.

ATSDR ATSDR ATSDR

Child Health Considerations

In communities faced with air, water, or food contamination, the many physical differences between children and adults demand special emphasis. Children could be at greater risk than are

adults from certain kinds of exposure to hazardous substances. Children play outdoors and sometimes engage in hand-to-mouth behaviors that increase their exposure potential. Children are shorter than are adults; this means they breathe dust, soil, and vapors close to the ground. A child's lower body weight and higher intake rate results in a greater dose of hazardous substance per unit of body weight. If toxic exposure levels are high enough during critical growth stages, the developing body systems of children can sustain permanent damage. Finally, children are dependent on adults for access to housing, for access to medical care, and for risk identification. Thus adults need as much information as possible to make informed decisions regarding their children's health.

Conclusions

Recommendations

1. ATSDR agrees with EPA's assessment and recommends removal actions to mitigate exposure conditions at the Remacor Site, West Pittsburgh, Pennsylvania.
2. During a fire event, ATSDR recommends that the fire department use the typical/appropriate respiratory protection.

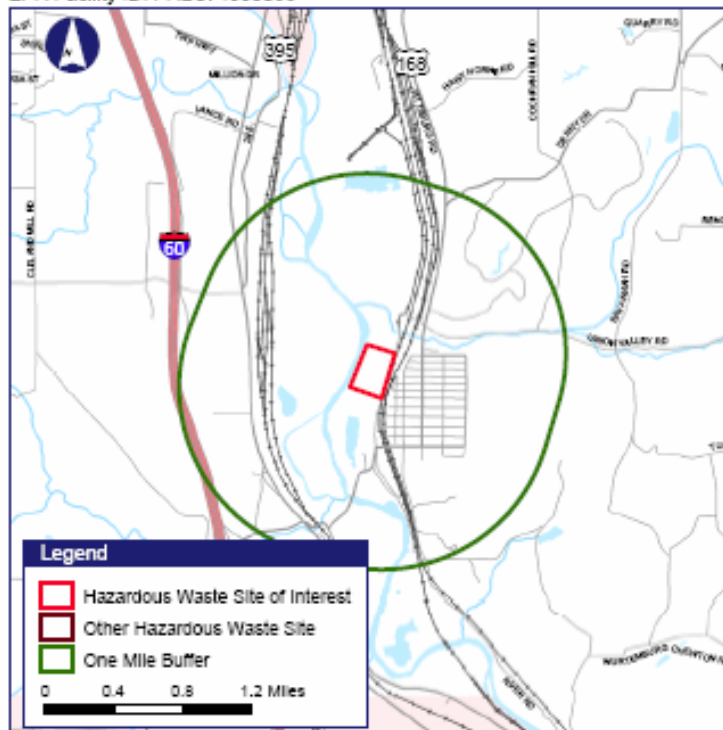
During a fire event, ATSDR recommends that the community be notified to shelter in place until notified by the local authorities.

Public Health Action Plan

No further actions are planned at this time once removal activities have been completed.

Remacor, Inc.
West Pittsburg, PA

EPA Facility ID: PAD074965096

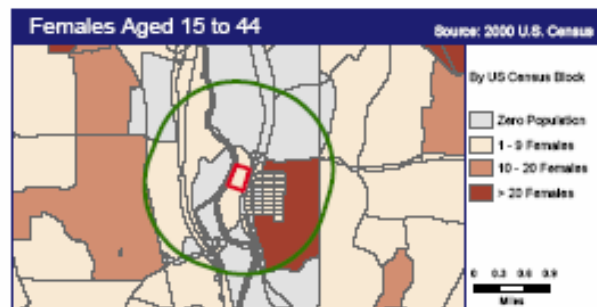
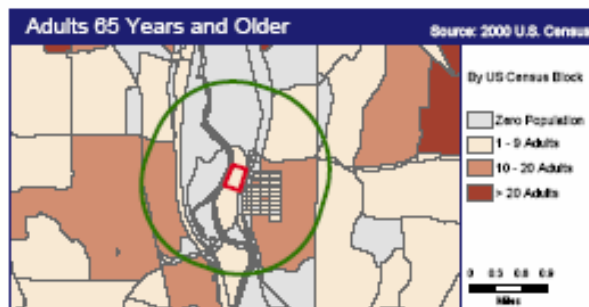
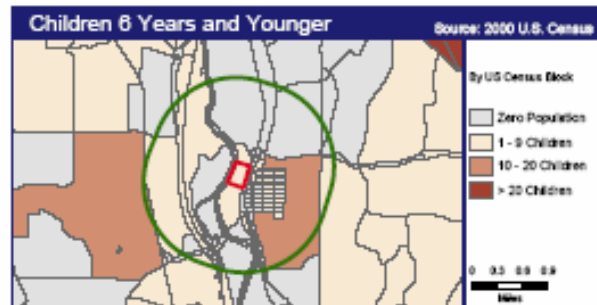
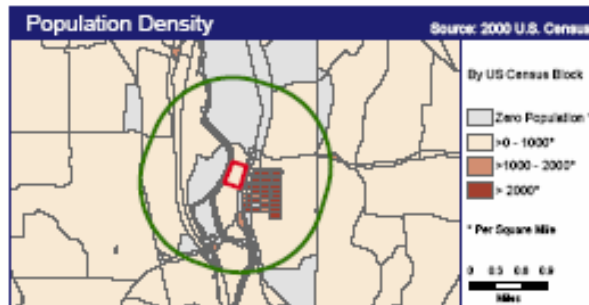


Demographic Statistics
Within One Mile of Site*

Total Population	1,054
White Alone	1,037
Black Alone	8
Am. Indian & Alaska Native Alone	4
Asian Alone	1
Native Hawaiian & Other Pacific Islander Alone	0
Some Other Race Alone	4
Two or More Races	3
Hispanic or Latino**	3
Children Aged 6 and Younger	85
Adults Aged 65 and Older	228
Females Aged 15 to 44	170
Total Housing Units	460

Base Map Source: Geographic Data Technology, May 2005.
Site Boundary Data Source: ATSDR Geospatial Research, Analysis, and Services Program,
Current as of Generate Date (bottom left-hand corner).
Coordinate System (All Panels): NAD 1983 StatePlane Pennsylvania South FIPS 3702 Feet

Demographics Statistics Source: 2000 U.S. Census
* Calculated using an area-proportion spatial analysis technique
** People who identify their origin as Hispanic or Latino may be of any race.



GRASSMASTER 1.3 - GENERATED: 12-11-2006

Figure 1. Demographics surrounding the RemacorSite

Authors

Paul A. Charp, Ph.D.
Senior Health Physicist
ATSDR, Atlanta

References

- 1 Action memorandum from Jack Downie On-Scene Coordinator, US Environmental Protection Agency to James Burke US Environmental Protection Agency dated November 1, 2006.
- 2 Letter from Jack L. Downie, OSC. To Dan Holler, PADEP dated May 2, 2006
- 3 ATSDR Record of Activity dated September 9, 2006 and prepared by Paul Charp, Division of Health Assessment and Consultation
- 4 ATSDR Record of Activity dated August 31, 2006 and prepared by Joe Little, Division of Toxicology and Environmental Medicine